Neutrophil Responses to Aspergillosis: New Roles for Old Players.

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Abstract

Neutrophils are professional phagocytic cells that play a crucial role in innate immunity. Through an assortment of antifungal effector mechanisms, neutrophils are essential in controlling the early stages of fungal infection. These mechanisms range from the production of reactive oxygen intermediates and release of antimicrobial enzymes to the formation of complex extracellular traps that aid in the elimination of the fungus. Their importance in antifungal immunity is supported by the extreme susceptibility to infection of patients with primary (e.g., chronic granulomatous disease) or acquired (e.g., undergoing immunosuppressive therapy) neutrophil deficiency. More recently, common genetic variants affecting neutrophil antifungal capacity have also been disclosed as major risk factors for aspergillosis in conditions of generalized immune deficiency. The present review revisits the role of neutrophils in the host response against Aspergillus and highlights the consequences of their deficiency in susceptibility to aspergillosis.

Involved units

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